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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,420	05/04/2004	Youssef Hamidieh	81098863 / FMC 1747 PUS	3419

28395 7590 04/21/2006

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EXAMINER

CHAPMAN JR, JOHN E

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,420

Applicant(s)

HAMIDIEH ET AL.

Examiner

John E. Chapman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15, 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/27/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 16-18 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pomernacki (4,252,023).

Pomernacki discloses a checking system for detecting anomalies in a moveable component (gear 10 or 12), comprising an actuator 40 to operate (rotate) the component at a predetermined speed (col. 2, line 9); a structure (42) for supporting the component (gear 12) while the component is being rotated, the structure having a modal frequency (i.e., resonant frequency) approximately the same as the anomaly (tooth-to-tooth) frequency (col. 2, lines 8-13), and a sensor (68) for measuring values of a response parameter (acceleration).

While claim 16 recites that the checking system anomaly frequency should be different from the assembly anomaly frequency, such limitation reflects the intended use of the component and fails to structurally distinguish the apparatus. Whether the anomaly frequency of the gear (10 or 12) when subsequently installed in an assembly is greater or less than the anomaly frequency in the checking system does not affect the structure of the checking system. The checking system of Pomernacki is inherently capable of detecting anomalies in gears that are subsequently operated in an assembly at speeds that are different from that in the gear checking system. Furthermore, it would have been obvious to detect anomalies in gears that are subsequently operated in an assembly at speeds that are different from that in the gear checking system, for example, in an assembly that is operated at a plurality of speeds.

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Regarding the limitation that the checking system have “at least one modal frequency within a predetermined frequency range of the checking system including the at least one checking system anomaly frequency,” since the anomaly (tooth-to-tooth) frequency is substantially the same as the modal (resonant) frequency, it is necessarily within a small frequency range of the modal frequency.

Regarding the limitation that the structure be configured “using the at least one checking system anomaly frequency,” the patentability of a product does not depend on its method of production. If the product is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 17, the brake 32 comprises a second actuator operable to apply a load to the component (gear 10 or 12).

3. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pomernacki.

Regarding claim 19, Pomernacki does not discuss the type of gears being noise tested. Nevertheless, it would have been obvious to use the apparatus of Pomernacki to noise test a variety of gears, including a vehicle transmission gears.

Regarding claim 20, Fig. 3 shows single flank contact.

4. Claims 1-15, 22 and 23 are allowed.

5. Applicant's arguments filed February 27, 2006 have been fully considered but they are not persuasive. Applicant argues that Pomernacki fails to teach and/or suggest adjusting or tuning the checking system based on a checking system anomaly frequency. However, such limitation is directed to a method of configuring a checking system and fails to structurally distinguish the checking system itself.


6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John E Chapman
Primary Examiner
Art Unit 2856